WE CLAIM:

1. The method of determining carrier frequency of a biphase code-modulated radio frequency input signal, said method comprising the steps of:

converting a sample of said biphase code-modulated radio frequency input signal from an analog signal format to a first sequence of digital signals;

generating a second sequence of signals from said first sequence of digital signals by performing a point by point squaring of said first sequence digital signals;

removing a direct current component from said squared first sequence, second sequence, signals to form a third sequence of signals;

mixing a local oscillator signal with said third sequence signals to form a frequency down converted sequence of real signal and imaginary signal complex value pairs;

averaging selected length groupings of said real signal and said imaginary signal complex value pairs to form lowered frequency representations of said real signal sequence and said imaginary signal sequence;

combining said lowered frequency real signal sequence and said lowered frequency imaginary signal sequence to form a composite lowered frequency representation of said biphase code-modulated input signal;

identifying included frequency components of said biphase-code-modulated input signal by performing a Fourier transformation on said composite lowered frequency representation of said frequency down converted signals.

2. The method of determining carrier frequency of a biphase code-modulated radio frequency input signal of claim 1 wherein said radio frequency input signal comprises the course acquisition L1 code of a global position system signal.

3. The method of determining carrier frequency of a biphase code-modulated radio frequency input signal of claim 2 further including the step of down converting said course acquisition L1 code signal to a frequency of 21.25 megahertz prior to said converting analog signal format to a first sequence of digital signals step and wherein said converting analog signal format to a first sequence of digital signals step includes sampling said 21.25 megahertz signal at a rate of 5 megahertz.

4. The method of determining carrier frequency of a biphase code-modulated radio frequency input signal of claim 3 wherein said step of sampling said 21.25 megahertz signal at a rate of 5 megahertz comprises a one hundred twenty five times over sampling with respect to a Nyquist sampling requirement.

5. The method of determining carrier frequency of a biphase code-modulated radio frequency input signal of claim 1 wherein said step of generating a second sequence of signals from said first sequence of digital signals by performing a point by point squaring of said first sequence digital signals includes generating a signal mathematically characterized by having a doubled input frequency term and constant value term.

6. The method of determining carrier frequency of a biphase code-modulated radio frequency input signal of claim 1 wherein said sequence of steps is performed in one of a real time and an off-line operating modes.

7. The method of determining carrier frequency of a biphase code-modulated radio frequency input signal of claim 1 wherein said step of removing a direct current component from said squared first sequence, second sequence, signals to form a third sequence of signals includes subtracting an average value signal from said second sequence signals.

8. The method of determining carrier frequency of a biphase code-modulated radio frequency input signal of claim 1 wherein said radio frequency input signal includes a Doppler shift component of frequency between zero and ten kilohertz frequency.

9. The method of determining carrier frequency of a biphase code-modulated radio frequency input signal of claim 1 wherein said Fourier transformation comprises a fast Fourier transformation.

10. Biphase code-modulated radio frequency input signal carrier frequency determination apparatus, said apparatus comprising:

analog to digital converter means for converting a sample of said biphase code-modulated radio frequency input signal to a first sequence of digital signals;

multiplication means for generating a second sequence of signals from said first sequence of digital signals by performing a point by point squaring of said first sequence digital signals;

average value-subtraction means for removing a direct current component from said second sequence signals to form third sequence signals;

local oscillator and heterodyne mixer means for adding a local oscillator circuit output signal to said third sequence signals to form a frequency down converted sequence of complex value pairs;

means for averaging selected length groupings of said real signal and said imaginary signal complex value pairs to form lowered frequency representations of said real signal sequence and said imaginary signal sequence;

means for combining said lowered frequency real signal sequence and said lowered frequency imaginary signal sequence to form a composite lowered frequency signal sequence representation of said biphase code-modulated input signal;

Fourier transformation means for identifying included frequency components of said biphase-coded input signal in said composite lowered frequency representation of said frequency down converted signals.

11. The biphase code-modulated radio frequency input signal carrier frequency determination apparatus of claim 10 wherein said apparatus comprises a portion of a global position signal sensing radio receiver.

12. The biphase code-modulated input signal carrier frequency determination apparatus of claim 10 further including means for converting said course acquisition L1 code signal to a frequency of 21.25 megahertz prior to said analog to digital converter means.

13. The biphase code-modulated radio frequency input signal carrier frequency determination apparatus of claim 10 wherein said analog to digital converter means includes a 21.25 megahertz input frequency and a 5 megahertz sampling frequency.

14. The biphase code-modulated radio frequency input signal carrier frequency determination apparatus of claim 10 wherein said multiplication means for generating a second sequence of signals from said first sequence of digital signals by performing a point by point squaring of said first sequence digital signals comprises means for generating a signal mathematically characterized by having a doubled input frequency term and constant value term.

15. The biphase code-modulated radio input signal carrier frequency determination apparatus of claim 10 wherein said local oscillator and heterodyne mixer means are characterized by an input frequency of two and one half megahertz and a Doppler output frequency of ten kilohertz.

16. The biphase code-modulated radio input signal carrier frequency determination apparatus of claim 10 wherein said local oscillator and heterodyne mixer means frequency down converted sequence of complex value pairs includes a sequence of real signal values and a sequence of imaginary signal values of equal sequence lengths.

17. The method of determining carrier frequency of a digitally converted, mathematically squared, frequency doubled, dc component-removed, representation of an analog biphase modulated radio frequency input signal, said method comprising the steps of:

converting said squared, frequency doubled, dc component-removed, representation of a biphase modulated radio frequency input signal to a first signal of lowered frequency composition in a heterodyning mixer process;

said first signal of lowered carrier frequency having recombined complex real and imaginary signal components generated during said converting step;

generating a succession of representative average magnitudes of said recombination signal of lowered carrier frequency over selected time intervals;

said succession of representative average magnitudes comprising a second signal of additionally lowered frequency content representing said radio frequency input signal;

determining a frequency content of said second signal of additionally lowered frequency content using Fourier transformation processing.